

November 11, 2004
Case No. PHF 99,598 (7790/322)
Serial No.: 09/551,816
Filed: April 18, 2000
Page 2 of 10

CLAIM AMENDMENTS

A listing of the entire set of claims 1-18 is submitted herewith per 37 CFR §1.121. This listing of claims 1-18 will replace all prior versions, and listings, of claims in the application.

1.-6. (Cancelled)

7. (Currently Amended) A primary radio station for use in a communication system including a plurality of secondary radio stations, said primary station comprising:

a multi-directional controllable antenna structure operable to transmit and receive radio signals;

acquisition means for acquiring data relating to at least one of said secondary stations from at least one radio signal received by said multi-directional controllable antenna structure;

selection means for, based on the acquired data, conditionally selecting at least an active secondary station and conditionally selecting at least an alternative secondary station suitable for becoming active;

calculation means for calculating directions of signals received from the selected secondary stations;

storage means for storing the calculated directions; and

control means for controlling said multi-directional controllable antenna structure in dependence of the stored directions.

8. (Previously Presented) The primary station of claim 7, further comprising: tracking means for tracking a direction of the active secondary station with said multi-directional controllable antenna structure.

9. (Previously Presented) The primary station of claim 7, wherein said multi-directional controllable antenna structure includes a plurality of directional antennas;

November 11, 2004
Case No. PHF 99,598 (7790/322)
Serial No.: 09/551,816
Filed: April 18, 2000
Page 3 of 10

wherein the acquired data are quality data associated with at least one secondary station/directional antenna pairing; and

wherein the active secondary station is the secondary station associated with a secondary station/directional antenna pairing having a highest quality data.

10. (Currently Amended) A method for controlling a multi-directional controllable antenna structure in a primary radio station intended to communicate with a plurality of secondary stations of a radio communication network, said method comprising:

acquiring data relating to at least one of said secondary stations from at least one radio signal received by the multi-directional controllable antenna structure;

based on the acquired data, conditionally selecting at least an active secondary station and conditionally selecting at least an alternative secondary station suitable for becoming active;

calculating directions of signals received from the selected secondary stations;

storing the calculated directions; and

controlling the multi-directional controllable antenna structure in dependence of the stored directions.

11. (Previously Presented) The method of claim 10, further comprising:

tracking a direction of the active secondary station with the multi-directional controllable antenna structure.

12. (Previously Presented) The method of claim 10,

wherein the multi-directional controllable antenna structure includes a plurality of directional antennas;

wherein the acquired data are quality data associated with at least one secondary station/directional antenna pairing; and

wherein the active secondary station is the secondary station associated with a secondary station/directional antenna pairing having a highest quality data.

November 11, 2004
Case No. PHF 99,598 (7790/322)
Serial No.: 09/551,816
Filed: April 18, 2000
Page 4 of 10

13. (Currently Amended) A radio communication system, comprising:
a plurality of secondary stations; and
a primary radio station including
a multi-directional controllable antenna structure operable to transmit
and receive radio signals,
acquisition means for acquiring data relating to at least one of said
secondary stations from at least one received radio signal,
selection means for, based on the acquired data, conditionally selecting
at least an active secondary station and conditionally selecting at least an alternative
secondary station suitable for becoming active,
calculation means for calculating directions of signals received from
the selected secondary stations,
storage means for storing the calculated directions, and
control means for controlling said antenna structure in dependence of
the stored directions.
14. (Previously Presented) The radio communication network of claim 13,
wherein said primary station further includes tracking means for tracking a direction
of an active secondary station with said multi-directional controllable antenna
structure.
15. (Previously Presented) The primary station of claim 13,
wherein the multi-directional controllable antenna structure includes a
plurality of directional antennas;
wherein the acquired data are quality data associated with at least one
secondary station/directional antenna pairing; and
wherein the active secondary station is the secondary station associated with a
secondary station/directional antenna pairing having a highest quality data.
16. (Currently Amended) A computer program for use in a primary radio station
having a multi-directional controllable antenna structure and intended to be used in a

November 11, 2004
Case No. PHF 99,598 (7790/322)
Serial No.: 09/551,816
Filed: April 18, 2000
Page 5 of 10

radio communication network having a plurality of secondary stations, said computer program comprising computer program code means to make the primary radio station:

- acquire data relating to at least one of said secondary stations from at least one radio signal received by the multi-directional controllable antenna structure;
- based on the acquired data, conditionally select at least an active secondary station and conditionally select at least an alternative secondary station suitable for becoming active;
- calculate directions of signals received from the selected secondary stations;
- store the calculated directions; and
- control the multi-directional controllable antenna structure in dependence of the stored directions.

17. (Previously Presented) The computer program of claim 16, wherein said computer program further comprises computer program means to make the primary radio station track a direction of the active secondary station with the multi-directional controllable antenna structure.

18. (Previously Presented) The computer program of claim 16,

- wherein the multi-directional controllable antenna structure includes a plurality of directional antennas;
- wherein the acquired data are quality data associated with at least one secondary station/directional antenna pairing; and
- wherein the active secondary station is the secondary station associated with a secondary station/directional antenna pairing having a highest quality data.